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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/687,602

10/20/2003

Geoffrey Canright

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1909

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10/23/2006

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EXAMINER

NGUYEN, MERILYN P

ART UNIT

PAPER NUMBER

2163

DATE MAILED: 10/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/687,602

Applicant(s)

CANRIGHT ET AL.

Examiner

Marilyn P. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 25-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 25-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>05/09/2006</u> . | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action</u> . |

DETAILED ACTION

1. In response to the communication dated 07/31/2006, claims 1-19 and 25-37 are pending in this application as the result of the cancellation of claims 20-24.
2. PCT/US04/30908 is a continuation of this application.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-19, and 25-37 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As set forth in MPEP 21 06(II)A:

Identify and understand Any Practical Application Asserted for the Invention The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96),¹ In re Ziegler, 992, F.2d 1 197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)34. Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.

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Apart from the utility requirement of 35 U.S.C. 101, usefulness under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement. See *Arrhythmia*, 958 F.2d at 1057, 22 USPQ2d at 1036. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35 U.S.C. 101 since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application.

The claimed invention is subject to the test of *State Street*, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. Specifically *State Street* sets forth that the claimed invention must produce a "useful, concrete and tangible result". The Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility states in section IV C. 2 b. (2) (on page 21 in the PDF format):

The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a §101 judicial exception, in that the process claim must set forth a practical application of that §101 judicial exception to produce a real-world result. *Benson*, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had "no substantial practical application").

In the present case, claimed invention (Claims 1-6, 13-18, and 26-37) recites a method of searching, navigating or retrieving one or more information objects in one or more electronic archives and including ranking the relevance of a node in a linked set of nodes comprising determining an authority weight, determining a hub weight and ranking the relevance based upon the authority weight and the hub weight which does not provide useful and tangible results. In order for the claim to be tangible, it must have real world value rather than being an abstract result. The claim contains software per se which is not tangible. Moreover, the claim lack of practical application such as lack of enablement factor. For example, the preamble of the claim recites searching, navigating or retrieving information objects, however, the body of the claim does not support what claimed in the preamble. The ranking step merely recites a calculation based on another calculations which does not satisfy the useful result aspect of the practical application requirement.

In the present case, claimed invention (Claims 7-12, and 19), the claim recites a system **for** searching, navigating or retrieving one or more information objects in one or more electronic archives and including ranking the relevance of a node in a linked set of nodes comprising a calculator calculating authority weight and a hub weight which does not provide useful and tangible results. In order for the claim to be tangible, it must have real world value rather than being an abstract result. The claim contains software per se which is not tangible. Moreover, the claim does not satisfy the useful result aspect of the practical application requirement because it lacks of enablement factor. Merely recite a machine calculator doing math such as calculating of authority weight and hub weight within the intention (“for searching, navigating or retrieving”, “for said node”) does not make the claim one of the four statutory categories. Claim 19 further

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recites a relay module which is a program that not physically embodied on a computer readable storage medium.

Claim 25 recites a computer program product, which is not physically embodied on a computer readable storage medium.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-19, and 25-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claims 1-6, 13-18, and 26-37, the preamble of the claim recites searching, navigating or retrieving information objects, however, the body of the claim does not support what claimed in the preamble. The ranking step merely recites a calculation based on another calculations which does not satisfy the useful result aspect of the practical application requirement.

Regarding claims 7-12, and 19, the claims merely recite a machine calculator doing math such as calculating of authority weight and hub weight within the intention (“for searching, navigating or retrieving”, “for said node”) which lacks of how the calculations was being used for searching, navigating or retrieving one or more information objects.

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-19 and 26-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 13, there are no steps given to arrive the method of searching, navigating or retrieving one ore more information objects in one ore more electronic archives and including ranking the relevance of a node in a linked set of nodes. The recitations in the body of the claim do not support the preamble.

Regarding claims 1 and 4-6, these claims are incomplete for omitting essential structural cooperative relationships of elements. See MPEP § 2172.01. The omitted structural cooperative relationships are: Claims recite determining, selecting, displaying and ranking steps that are not related to each others. For example, how selecting a search term relates to the steps of ranking and displaying (Claims 1, 4-5). Moreover, the step of “displaying a ranking result” (claim 5) is incomplete because there are no steps given to arrive a ranking result thus no way to display a ranking result that is not generated. Claim 6 recites, “ranking the textual content of the node” which is incomplete as how the textual content of the node is ranked.

Regarding claims 7, 11-12, 19 and 23-24, these claims are incomplete for omitting essential structural cooperative relationships of elements. See MPEP § 2172.01. The omitted structural cooperative relationships are: a calculator, a search term selection device, a display

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and a textual content ranking mechanism are not connected to each other. The Examiner hardly figures out how these elements are being connected to support the ranking function. For example, how a search term selection device and a display contribute to the ranking function.

Regarding claims 13 and 16-18, these claims are incomplete for omitting essential structural cooperative relationships of elements. See MPEP § 2172.01. The omitted structural cooperative relationships are: Claims recite determining, selecting and ranking steps that are not related to each others. For example, how the steps of determining a principal eigenvector of a matrix and selecting a search term relate to the step of ranking (Claims 13, 16-17). Moreover, claim 18 recites "ranking the textual content of the node" is incomplete as how the textual content of the node is ranked.

Regarding claims 26, 29-32 and 35-37, these claims are incomplete for omitting essential structural cooperative relationships of elements. See MPEP § 2172.01. The omitted structural cooperative relationships are: means are not connected to each other as how these means are being related to support the ranking function.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 1, 4-7, 10-13, 16-19, 25-26, 29-32 and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chakrabarti (US 6,356,899), in view of Maim (US 2005/0171946).

Regarding claims 1 and 26, Chakrabarti/Maim discloses a computer-implemented method and a system of searching navigating or retrieving one or more information objects in one or more electronic archives and including ranking the relevance of a node in a linked set of nodes (See col. 8, lines 35-59 and col. 9, lines 59-64), comprising:

- determining an authority weight for said node using a non-compound, non-normalized Forward operator (See col. 20, lines 30-45); and
- determining a hub weight for said node using a non-compound, non-normalized Backward operator (See col. 20, lines 30-47),

However, Chakrabarti/Maim is silent as to disclose said steps of determining being mathematically decoupled. On the other hand, Maim teaches determining an authority weight and determining a hub weight independently (See page 8, paragraph [0201] to [0205], Maim et al.). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to determine the authority weight and hub weight independently. The motivation would have been to enhance the capability of ranking a document via two distinct weights or scores.

Regarding claims 4, 16 and 29, Chakrabarti/Maim further discloses determining a principal eigenvector of a matrix (See col. 19, lines 27-29).

Regarding claims 5, 17 and 30, Chakrabarti/Maim further discloses selecting a search term (See col. 25, line 51 to col. 26, lines 1-3); and displaying a ranking result (See Fig. 6).

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Regarding claims 6, 18 and 31, Chakrabarti/Maim further discloses ranking the textual content of the node (See col. 19, lines 55-65).

Regarding claims 7 and 19, Chakrabarti/Maim discloses system for ranking the relevance of a node in a linked set of nodes comprising:

- a calculator configured to calculate an authority-like weight for said node and a hub-like weight for said node, using, respectively, a non-compound, non-normalized Forward operator and a non-compound, non-normalized Backward operator (See col. 20, lines 30-47), said calculations being mathematically decoupled as addressed above in claim 1.

Chakrabarti/Maim also discloses a relay module connected to said calculator and configured to relay a corresponding calculated authority-like weight and hub-like weight to a display as per claim 19 (See Fig. 6).

Regarding claim 10, Chakrabarti/Maim discloses said calculator comprising:

a calculator configured to calculate a principal eigenvector of a matrix (See col. 19, lines 27-29).

Regarding claim 11, Chakrabarti/Maim further discloses a search term selection device (See col. 25, line 51 to col. 26, lines 1-3); and a display (See Fig. 6).

Regarding claim 12, Chakrabarti/Maim further discloses a textual content ranking mechanism (See col. 19, lines 55-65).

Regarding claims 13 and 32, Chakrabarti/Maim disclose a method and a system for ranking the relevance of a node in a linked set of nodes, the improvement comprising:

- means (See col. 6, lines 31-52) for determining one of an authority-like weight for said node using a non-compound, non-normalized Forward operator, and a hub-like weight for said node using a non-compound, non-normalized Backward operator (See col. 20, lines 30-47).

Regarding claims 16 and 35, Chakrabarti/Maim further discloses means for determining a principal eigenvector of a matrix (See col. 19, lines 27-29).

Regarding claims 17 and 36, Chakrabarti/Maim further discloses means for selecting a search term (See col. 25, line 51 to col. 26, lines 1-3).

Regarding claim 18 and 37, Chakrabarti/Maim further discloses means for ranking the textual content of the node (See col. 19, lines 55-65).

Regarding claim 25, Chakrabarti/Maim discloses a computer program product configured to host instructions corresponding to any one of the steps of Claims 1-6 and 13-18 (See col. 24, lines 19-65).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marilyn P Nguyen whose telephone number is 571-272-4026. The examiner can normally be reached on M-F: 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

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A handwritten signature in black ink, appearing to be 'MN' with a stylized flourish.

MN

October 15, 2006

A handwritten signature in black ink, appearing to be 'Don Wong' with a large circular flourish at the end.

DON WONG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100